

Description of Additional Supplementary Files

Supplementary Data 1. Demographic and clinical parameters of cohort of axial spondyloarthritis patients with or without BASDAI 50 response. Values represent mean $\pm$ standard deviation, median [IQR], or n (%). *BASDAI 50 response means $\geq 50\%$ improvement in BASDAI at week 14 compared to week 0. $\dagger$ Difference between two values, value of week 14 - week 0. $\ddagger$ ASAS response data were available in 38 patients.

Supplementary Data 2. Marker genes of PBMC clusters in 22 AS patients. Statistical significance for differential expression analysis calculated using MAST (two-sided), with multiple comparisons adjusted via the Benjamini–Hochberg (BH) method.

Supplementary Data 3. Marker genes for detailed PBMC annotations in 22 AS patient samples.

Supplementary Data 4. Marker genes for monocyte cluster annotations in AS patient samples.

Supplementary Data 5. Marker genes for annotated PBMC clusters under AIF-1 treated and control conditions in healthy donors.

Supplementary Data 6. Marker genes within monocyte subpopulations from PBMCs under AIF-1 treated and control conditions.

Supplementary Data 7. Marker genes of monocyte subclusters from PBMCs in vitro under Adalimumab treatment.

Supplementary Data 8. Marker genes of subclusters within memory CD4 T cells from AS patient samples. Statistical significance for differential expression analysis calculated using MAST (two-sided), with multiple comparisons adjusted via the Benjamini–Hochberg (BH) method.